

CLAIMS

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① 1. A rigid tubular member of a variable length formed from sheet steel-stock in which the member sidewalls are generally planar throughout their length and adapted to be custom-fitted and conjoined with at least one rigid surface of another member, the tubular member being provided with linear groovings along at least one planar surface to permit controlled separation of at least one sidewall thereof along the groovings, such tubular member comprising:

(a) a transverse configuration which is rectangular in cross-section and has open longitudinal ends; and

(b) a first pair of externally-placed, linear groovings arrayed in parallel with each of the groovings being located proximal to each of the two seams of a single member sidewall in one planar surface of the member, and each of the groovings being of a depth sufficient to facilitate separation under force of at least an initial finger of one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

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① 2. The tubular member of Claim 1 wherein a second pair of externally-placed, linear groovings, arrayed in parallel, are located in an opposing planar surface of the member, with each of the groovings being located proximal to one of the elongate set in the opposing planar surface, and each of the second pair of groovings being of a depth sufficient to facilitate separation under force of at least an initial second finger from a second sidewall end segment from the adjoining two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

5 DP 3. The tubular member of Claim 2 wherein a third pair of externally-placed, linear  
3 groovings, arrayed in parallel, are located in at least one of the third and fourth planar surfaces of  
the member, having the same juxtaposition as did each of the first and second pairs, and being of  
substantially the same depths as the first and second pairs of groovings to facilitate separation  
under force of at least an initial third finger from a third sidewall end segment from the adjacent  
10 two sidewall end segments.

DP 4. A rigid tubular member of a variable length formed from sheet steel stock, in  
4 which the member sidewalls are generally planar throughout their length and adapted to be  
custom-fitted and conjoined with at least one planar surface of another member, the tubular  
member being provided with linear groovings along at least one planar surface to permit  
controlled separation of at least one sidewall thereof along the groovings, such tubular member  
comprising:

(a) a transverse configuration which is rectangular in cross-section and has open  
longitudinal ends; and

(b) a first pair of externally-placed linear groovings, arrayed in parallel, with each  
20 such grooving located coincident with the two external linear seams of the tubing located on the  
elongate edges of one planar surface thereof, and with each of such groovings being of a depth  
sufficient to facilitate separation under force of at least an initial first finger from a first sidewall  
end segment from the adjacent sidewall end segments.

5. The tubular member of Claim 4 wherein a second pair of externally-placed, linear  
25 groovings, arrayed in parallel, are located in an opposing planar surface of the member, with  
each of the groovings being located coincident with the external linear seams of the tubing and

5 on the opposing elongate edges of one planar surface thereof, and with each of the second pair  
7 being of a depth sufficient to facilitate separation under force of at least an initial second finger  
6 from a second sidewall end segment from the adjoining two sidewall end segments, while  
maintaining the structural integrity of the transverse dimension of the separated sidewall end  
segment at the end point of separation.

10 <sup>Dep</sup> 6. A rigid tubular member of a variable length formed from sheet steel stock in  
which the member sidewalls are generally planar throughout their length adapted to be custom-  
fitted and conjoined with at least one rigid surface of another rigid member, the tubular member  
being provided with linear groovings along at least one planar surface to permit controlled  
separation of at least one sidewall thereof along the groovings, such tubular member comprising:

(a) a transverse configuration which is rectangular in cross-section and has open  
longitudinal ends; and

(b) a first pair of internally-placed, linear groovings, arrayed in parallel, with each of  
the groovings being located coincident with the two internal linear seams of one planar surface  
of a tubing sidewalls, thereof, with each of the groovings being of a depth sufficient to facilitate  
20 separation under force of at least an initial first finger from one sidewall end segment from the  
adjacent two sidewall end segments, while maintaining the structural integrity of the transverse  
dimension of the separated sidewall end at the points of separation.

25 <sup>7</sup> 7. The tubular member of Claim 6 wherein a second pair of internally placed, linear  
7 groovings, arrayed in parallel, are located in the opposing planar surface of the member, with  
each of the groovings being located coincident with the two elongate seams in the opposing  
planar surface, and each of the second pair being of a sufficient depth sufficient to facilitate

5 separation under force of at least an initial second finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end at the points of separation.

10 8. A rigid tubular member of a variable length formed from sheet steel stock in which the member sidewalls are generally planar throughout their length adapted to be custom-fitted and conjoined with at least one rigid surface of another member, the tubular member being provided with linear groovings along at least one planar surface to permit controlled separation of at least one sidewall along the groovings, adapted to be fitted to other surfaces, such tubular member comprising:

(a) a transverse configuration which is rectangular in cross-section and has open longitudinal ends;

(b) a first pair of externally-placed, linear groovings, arrayed in parallel, with each of the groovings being located proximal to each of the two seams of a single member sidewall in one planar surface of the member; and,

(c) a first pair of internally-placed, linear groovings, arrayed in parallel, with each of the groovings being located coincident with the internal linear seams of a first planar surface tubing sidewalls, of the first planar surface thereof, with the combination of the internal and external groovings being of a depth sufficient to facilitate separation under force of at least an initial first finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end at the points of separation.

9. The tubular member of Claim 8 wherein:

5 (a) a second pair of externally-placed, linear groovings, arrayed in parallel, are located in the opposing planar surface of the member, with each of the groovings being located proximal to one of the elongate seams in an opposing planar surface; and,

(b) a second pair of internally placed, linear groovings, arrayed in parallel, are located in the opposing planar surface of the member, and disposed on the opposing elongate edge of the opposing planar surface, with each of the groovings being located coincident with one of the elongate seams in the opposing planar surface, and with the combination of the internal and external groovings being of a sufficient depth sufficient to facilitate separation under force of at least an initial first finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end at the points of separation.

10 10. The tubular member of Claim 1 having a rectangular cross-section, wherein the internal span of the one opposing pair of sidewalls have depending end segments which are adapted to tightly engage the external span of a complementary pair of sidewalls on a second tubular member of identical cross dimensions.

11 11. A pair of conjoined tubular members of variable length and like rectangular cross-sections, formed from sheet steel stock, each having a narrower internal dimensional span and a comparatively wider external dimensional span wherein:

(a) the internal span of one opposing pair of sidewalls of a first member which is left intact, while at least one of the complementary end sidewalls of a second member and as to the one end sidewall it includes a first pair of externally-placed, linear groovings arrayed in parallel with each of the groovings being located proximal to one of the elongate opposing seams

5 11 in one planar surface of the member, and each of the groovings being of a depth sufficient to facilitate separation under force of at least an initial finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation which has been flared outwardly and fixedly and so that:

10 (b) the internal dimensional span of the first pair of sidewalls of the second member snugly straddles the narrower external dimensional span of the other intact first member for purposes of member conjoining at a point along the longitudinal dimensions of the first tubular member.

12 12. The conjoined tubular pair of Claim 11 wherein the straddling second member is mounted upon the other first member at a substantially right angle.

13 13. The conjoined tubular pair of Claim 11 wherein the straddling second member is mounted upon the other first member at an acute angle.

14 14. The conjoined tubular pair of Claim 11 wherein each of two or more flared fingers of the divergent sidewall end segments are provided with a substantially central perforation, which perforations are adapted to align themselves with a complementary set of perforations provided in the sidewalls of the other conjoined member, so as to permit the passage therethrough of two or more interconnecting and fastener members.

15. A pair of conjoined tubular members of variable length and rectangular cross-section both formed from sheet steel stock having a narrower external dimensional span and a comparatively wider internal dimensional span, wherein the external dimensional span of the opposing pair of sidewalls of the first member is left intact, while at least one of the end

5 sidewalls of the second member includes:

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(a) a first pair of externally-placed, linear groovings arrayed in parallel with each of the groovings being located proximal to each of the two seams of a single member sidewall in one planar surface of the member, and each of the groovings being of a depth sufficient to facilitate separation under force of at least an initial finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation and which has been flared outwardly and fixedly, so that:

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(b) the internal dimensional span of the second member tightly straddles the unflared end sidewalls of the external narrower dimension of the first member at its one longitudinal end, providing at least three sidewall end segments of the second member contacting the first member.

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16. A pair of conjoined tubular members each of variable length and rectangular cross-section, formed from sheet steel stock, each having a narrower external dimensional span and, on the opposing sides, a comparatively wider, internal dimensional span of the remaining two sides, wherein:

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(a) first pair of externally-placed, linear groovings arrayed in parallel with each of the groovings being located proximal to one of the elongate opposing seams in one planar surface of the second member, and each of the groovings being of a depth sufficient to facilitate separation under force of at least an initial finger from one sidewall end segment from the adjacent two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

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5 (b) a second pair of externally-placed, linear groovings, arrayed in parallel, are located in an opposing planar surface of the second member, with each of the groovings being located proximal to one of the elongate seams in the opposing planar surface, and each of the second pair of groovings being of a depth sufficient to facilitate separation under force of at least an initial second finger from a second sidewall end segment from the adjoining two sidewall end segments, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

(c) one opposing pair of sidewall end segments of the second member are flared angularly relative to the intact first member sidewall and seat upon an external planar surface of the first member sidewall;

(d) while at least one of the other end segments of the second member has been flared outwardly and fixedly so that:

(e) the opposing pair of sidewall end segments of the second member are stepped out and straddles the external dimensional span of the first intact tubular member.

17. The pair of tubular members of Claim 16 wherein the first member sidewall end segments and the intact second member sidewalls are each provided with a substantially central perforation, which perforations are adapted to align themselves with a complementary set of perforations in the underlying intact second member, so as to permit the passage therethrough of two or more interconnecting and fastening members.

18. A tubular member and a right angle member conjoined and each being of variable length and rectangular cross-section, formed from sheet steel stock, wherein at least one of the sidewall end segments of the angle member is flared angularly relative to one intact tubular



5 member sidewall and seats upon the external planar surface of the intact tubular member  
sidewall, wherein as to the angle member a first pair of externally placed, linear groovings are  
located proximal to a single seam with each of the groovings being of a depth sufficient to  
facilitate separation under force of an initial finger from one of the sidewall end segments.

10 19. The rigid tubular member of Claim 1 wherein the material of construction is a  
thermoplastic resin extruded to a formed member and retaining its structural integrity under  
bearing load.

20 20. A pair of conjoined tubular members each of variable length and rectangular  
cross-section both formed from sheet steel stock, wherein:

(a) a first pair of externally-placed, linear groovings arrayed in parallel with each of  
the groovings being located proximal to each of the two seams of a single member sidewall in  
one planar surface of the second member, and each of the groovings being of a depth sufficient  
to facilitate separation under force of at least an initial finger from one sidewall end segment  
from the adjacent two sidewall end segments, while maintaining the structural integrity of the  
transverse dimension of the separated sidewall end segment at the end point of separation.

(b) a second pair of externally-placed, linear groovings, arrayed in parallel, are  
located in an opposing planar surface of the second member, with each of the groovings being  
located proximal to one of the elongate seams in the opposing planar surface, and each of the  
second pair of groovings being of a depth sufficient to facilitate separation under force of at least  
an initial second finger from a second sidewall end segment from the adjoining two sidewall end  
segments, while maintaining the structural integrity of the transverse dimension of the separated

5 sidewall end segment at the end point of separation;

(c) one opposing pair of the sidewall end segments of the second member are flared angularly relative to the intact first member sidewall and seat upon an external planar surface of the first member sidewall;

10 (d) while at least one of the other end segments of the second member has been stepped out flared outwardly and fixedly, so that:

(e) the opposing pair of sidewall end members of the second member are adapted to straddle the external dimensional span of the first intact tubular member.

11 21. A rigid channel member of a variable length formed from extrudable aluminum stock in which the three member sidewalls are generally planar throughout their length and adapted to be custom-fitted and conjoined with at least one rigid surface of another member, the channel member being provided with linear groovings along at least one planar surface to permit controlled separation of at least one sidewall thereof along the groovings, such tubular member comprising:

20 (a) a transverse configuration which is rectangular in cross-section and has open longitudinal ends; and

(b) a first pair of externally-placed, linear groovings arrayed in parallel with each of the grooving being located proximal to one of the two seams of the center sidewall, and the grooving being of a depth sufficient to facilitate separation under force of at least an initial finger of one sidewall end segment from the adjacent sidewall end segment, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

5           22.     The channel member of Claim 21 wherein an externally-placed, linear groovings,  
is located in at least one of the sidewalls adjacent to the center sidewall being located proximal to  
the seam of the sidewalls, and each of the groovings being of a depth sufficient to facilitate  
separation under force of at least an initial second finger of one sidewall end segment from the  
adjacent center sidewall, while maintaining the structural integrity of the transverse dimension of  
10 the separated sidewall end segment at the end point of separation.

20           23.     A rigid tubular member of a variable length formed from sheet steel stock, in which  
the member sidewalls are generally planar throughout their length and adapted to be custom-  
fitted and conjoined with at least one rigid surface of another member, the tubular member being  
provided with linear groovings along at least one planar surface to permit controlled separation  
of at least one sidewall thereof along the groovings, such tubular member comprising:

          (a)     a transverse configuration which is rectangular in cross-section and has open  
longitudinal ends; and

          (b)     a first pair of externally-placed, linear groovings, with each grooving being  
located coincident with the two seams of a contiguous member sidewall, and each of the  
20 groovings being of a depth sufficient to facilitate separation under force of at least an initial first  
finger of one sidewall end segment from the adjacent two sidewall end segments, while  
maintaining the structural integrity of the transverse dimension of the separated sidewall end  
segment at the end point of separation, and

          (c)     a second pair of externally-placed, linear groovings, which are coincident with the  
25 two seams of the member opposing sidewall, and each of the groovings being of a depth  
sufficient to facilitate separation under force of at least a second finger from the adjacent sidewall

5 end segments while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

24. A rigid, angle-shaped member of a variable length formed from extrudable aluminum stock, in which the two member sidewalls are generally planar throughout their length and are adapted to be conjoined with at least one rigid surface of another member, comprising:

10 (a) a transverse configuration which is right angular in cross section, and has open longitudinal ends; and,

(b) a pair of externally-placed, linear groovings arrayed in parallel, with each of the groovings being located proximal to the one seam of the member and straddling said one seam of the member, and with each of the groovings being of a depth sufficient to facilitate separation under force of an initial finger of one sidewall end segment from the other sidewall end segment, while maintaining the structural integrity of the transverse dimension of the separated sidewall end segment at the end point of separation.

25. A rigid, angle-shaped member of a variable length formed from sheet steel stock, in which two member sidewalls are generally planar throughout their length and are adapted to be conjoined with at least one rigid surface of another member, the angle member being provided with a linear grooving along the seam of the planar surfaces to control separation of one sidewall thereof along the grooving, comprising:

(a) a transverse configuration which is right angular in cross section, and has open longitudinal ends; and,

25 (b) a linear grooving with the grooving being located coincident with the one seam of the member, and with the grooving being of a depth sufficient to facilitate separation under force of

5 an initial finger of one sidewall end segment from the other sidewall end segment, while  
maintaining the structural integrity of the transverse dimension of the separated sidewall end  
segment at the end point of separation.

26. A rigid channel member of a variable length formed from sheet steel stock in  
which the three member sidewalls are generally planar throughout their length and adapted to be  
10 conjoined with at least one rigid surface of another member, the channel member being provided  
with linear groovings along at least one planar surface to permit controlled separation of at least  
one sidewall thereof along the groovings, such tubular member comprising:

(a) a transverse configuration which is rectangular in cross-section and has open  
longitudinal ends; and

(b) a first pair of externally-placed, linear groovings arrayed in parallel with each of  
the groovings being located coincident with the two seams of the center sidewall, and each of the  
groovings being of a depth sufficient to facilitate separation under force of at least an initial  
finger from one sidewall end segment from the adjacent sidewall end segments, while  
maintaining the structural integrity of the transverse dimension of the separated sidewall end  
20 segment at the end point of separation.